

LISTING OF CLAIMS

1-3. (canceled)

4. (currently amended) An intake cam for a diesel engine, the cam comprising:

a base circle;

a trapping lobe, a dwell portion, and a main lobe extending in sequence from the base circle;

the trapping lobe projecting a low height from the base circle of the cam configured to provide an associated intake valve with only a small lift during a portion of an exhaust event in an engine cycle, whereby the valve is opened sufficiently to allow exhaust flow past the intake valve into an intake charge;

the dwell portion lying adjacent the trapping lobe and projecting slightly beyond the base circle a minimum height to maintain the associated intake valve nearly closed during the dwell portion prior to the end of the exhaust cycle; and

the main lobe lying adjacent the dwell portion and projecting a maximum height from the base circle to fully lift the associated intake valve during an intake event of an engine cycle.

5. (original) A cam as in claim 4 wherein the base circle has an angular extent of from between 120 degrees to 200 degrees.

6. (original) A cam as in claim 4 wherein the trapping lobe has an angular extent of from 30 degrees to 100 degrees.

7. (original) A cam as in claim 4 wherein the main lobe has an angular extent of from 80 degrees to 160 degrees.

8. (original) A cam as in claim 4 wherein the dwell portion between the trapping and main lobes has an angular extent of from 10 degrees to 60 degrees.